

FIGURE 1 (PRIOR ART)

The diagram illustrates a plasma diagnostic system. It begins with a 162 MHz source (12) connected to a power amplifier (14). The output of the power amplifier is monitored by a directional coupler (16), which provides forward (FWD) and reflected (REFL) signals. The main signal path from the power amplifier is connected to a mixer (24'). This mixer is preceded by a bandpass filter (20') and followed by a 200 kHz low pass filter (30'). The output of this filter is then amplified (34) and detected (38). A second receiver chain is also present, consisting of a mixer (26'), a bandpass filter (22'), a 200 kHz low pass filter (32'), an amplifier (36), and a detector (40). This second chain is also fed by the directional coupler (16). A 162.2 MHz oscillator (28) provides a reference signal to both mixers (24' and 26'). A DC power supply (40) is connected to the power amplifier (14) and a generator control unit (42). The generator control unit (42) is also connected to the 162 MHz source (12) and provides forward (FWD) and reflected (REFL) signals.

FIGURE 2

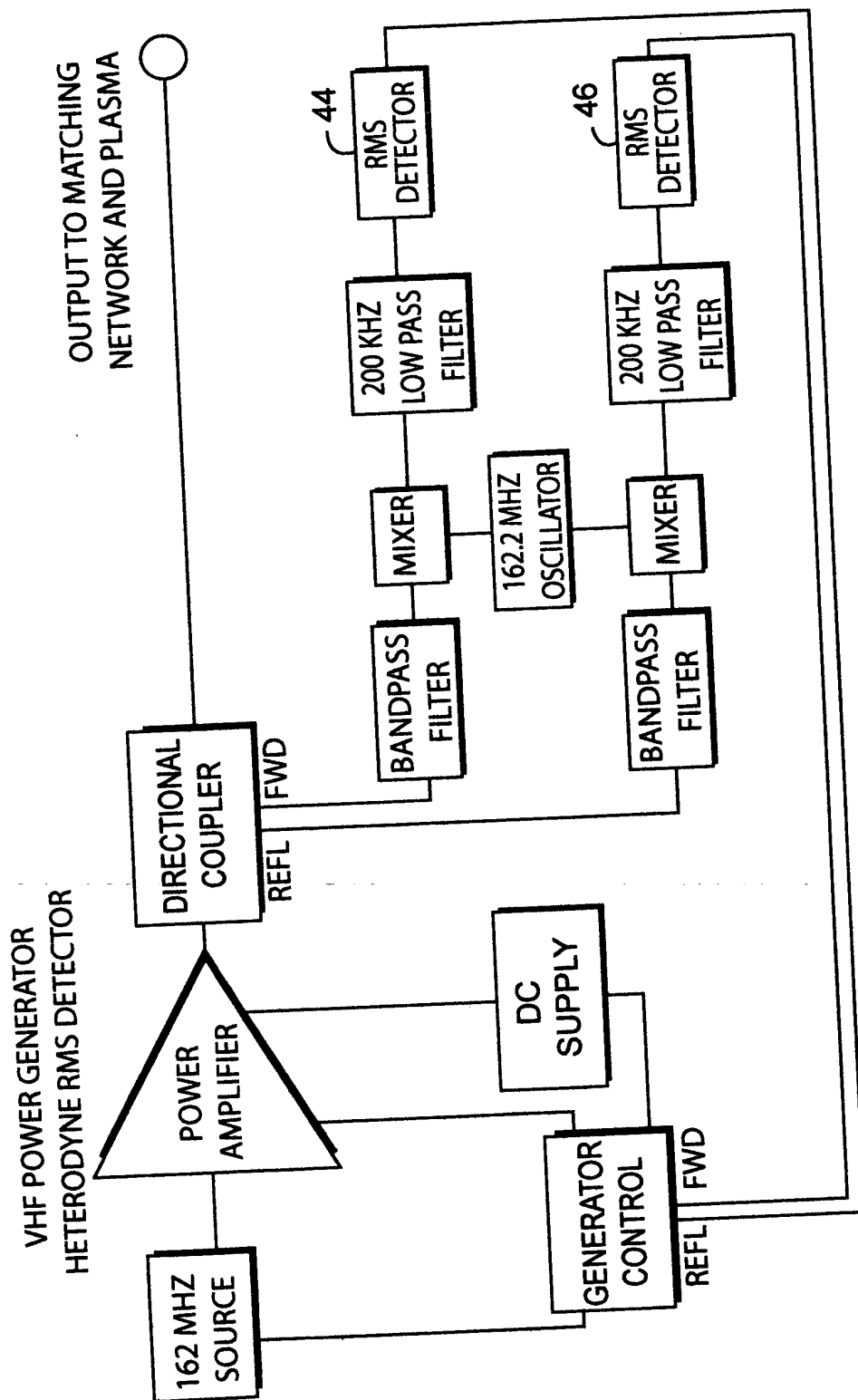


FIGURE 3



FIGURE 4